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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/829,405

04/21/2004

Kenneth L. Inman

2174-102

5964

36412

7590

04/04/2008

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EXAMINER

BOYCE, ANDRE D

ART UNIT

PAPER NUMBER

3623

MAIL DATE

DELIVERY MODE

04/04/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/829,405	<b>Applicant(s)</b> INMAN ET AL.	
	<b>Examiner</b> Andre Boyce	<b>Art Unit</b> 3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/13/08</u> .                                                 | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Claims 1-32 have been examined.

#### ***Claim Objections***

2. Claim 6 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim (i.e., claims 1). Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

#### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 17-32 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 17-24 recite a software system composed of "modules." As such, the system claims are defined merely by software or files, and thus are non-statutory. Claims 25-32 recite a "software product," without any recitation of a proper computer readable medium, and thus are non-statutory.

#### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 6-9, 14-17, 22-25 and 30-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Miller et al (US 2002/0184077).

As per claim 1, Miller et al disclose a method for segmenting a population (i.e., segmentation system for classifying households into market segments, ¶ 0017), comprising: generating population segmentation trees based on demographic data and on behavioral data for a set of consumers (i.e., generating a plurality of classification trees based on demographic and behavioral data, ¶ 0018); defining a base level population segmentation tree (i.e., population at node 1, figure 3); defining a set of alternative level variables useable as substitutes in the nodes of the population segmentation tree (i.e., populations split according to a plurality of decisions, ¶ 0021); and determining substitute split values for each node of the tree to enable up and down shifting between levels (i.e., splits based upon a different decision, ¶ 0022).

As per claim 6, Miller et al disclose generating population segmentation trees based on demographic data and on behavioral data for a set of consumers (i.e., generating a plurality of classification trees based on demographic and behavioral data, ¶ 0018).

As per claim 7, Miller et al disclose the split values are for income and age (¶ 0005).

As per claim 8, Miller et al disclose verifying the results of a segment determination when using substitute values (i.e., optimization of the segmentation, ¶ 0046).

Claims 9 and 14-16 are rejected based upon the same rationale as the rejection of claims 1 and 6-8, respectively, since they are the system claims corresponding to the method claims.

Claims 17 and 22-24 are rejected based upon the same rationale as the rejection of claims 1 and 6-8, respectively, since they are the software system claims corresponding to the method claims.

Claims 25 and 30-32 are rejected based upon the same rationale as the rejection of claims 1 and 6-8, respectively, since they are the software product claims corresponding to the method claims.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-5, 10-13, 18-21 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al (US 2002/0184077), in view of Christiansen et al (USPN 6,202,053).

As per claims 2-5, Miller et al does not explicitly disclose determining whether a level shift is required, determining segments using the base level tree when no level shift is required, determining segments using another level when a level shift is required, and a level determined when a level shift is required. Christiansen et al disclose in order to test the validity of the defined sub-populations, a representative sample of past applicants were rescored with the new methodology and compared with their actual credit history (column 4, lines 25-28), wherein based upon on a specific attribute a group was further segmented (column 4, lines 62-67). In addition, a scorecard for sub-populations is developed taking into account the likelihood an account would ever be 90 days or more past due, wherein the scorecards are developed using the criteria validated with the sample population, wherein the sample population is analyzed using the newly created scorecards (column 5, lines 25-45). It would have been obvious to one having ordinary skill in the art to include segmentation validity testing and level shifting in Miller et al, as seen in Christiansen et al, since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Claims 10-13 are rejected based upon the same rationale as the rejection of claims 2-5, respectively, since they are the system claims corresponding to the method claims.

Claims 18-21 are rejected based upon the same rationale as the rejection of claims 2-5, respectively, since they are the software system claims corresponding to the method claims.

Claims 26-29 are rejected based upon the same rationale as the rejection of claims 2-5, respectively, since they are the software product claims corresponding to the method claims.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-Pednault (USPN 7072841) discloses constructing segmentation based predictive models.

-Heckerman et al (USPN 6742003) disclose categorizing case data into clusters.

-Moskowitz et al (USPN 6662215) disclose selecting a population segment in accordance with a characteristic.

-Berstis et al (USPN 7089194) disclose adaptively targeting advertisements.

-Opdycke (US 2005/0039206) discloses optimizing media programming in public spaces.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre Boyce whose telephone number is (571)272-6726. The examiner can normally be reached on 9:30-6pm M-F.

Art Unit: 3623

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andre Boyce/  
Patent Examiner, Art Unit 3623  
March 30, 2008